

Applic. No.: 10/804,148

Amdt. Dated January 23, 2006

Reply to Office action of September 22, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 17-32 remain in the application. Claims 1-16 have been previously cancelled.

In the section entitled "Specification" on page 2 of the above-identified Office action, the Examiner has suggested the incorporating of sub-headings in the specification.

It is noted that sub-headings have been added in the preliminary amendment filed on 4/15/04, which has been entered. The specification has been amended to correct a typographical error.

In the section entitled "Claim Rejections - 35 USC § 102" on pages 2-3 of the above-mentioned Office action, claims 17-18, 22, and 29 have been rejected as being anticipated by Taylor et al. (US 5,323,309) under 35 U.S.C. § 102(b).

In the section entitled "Claim Rejections - 35 USC § 103" on pages 4-5 of the above-mentioned Office action, claims 19-21, 23-28, and 30-32 have been rejected as being unpatentable over Taylor et al. under 35 U.S.C. § 103(a).

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As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 17 calls for, inter alia:

an encoder receiving during normal operation a voltage supply from said main voltage supply, said encoder being switched to an auxiliary mode and receiving an auxiliary voltage and uses less energy when said main voltage supply fails, said encoder only determining a coarse determination of a measured value made during the auxiliary mode of operation.

Taylor et al. teach that when the external power/main supply fails, the resolver is monitored and controlled by an "auxiliary resolver position tracking (RPT) system" and an "uninterrupted power supply which includes a battery" so that no positional signal from the resolver will be lost. In order to minimize the burden of the auxiliary power (battery), during an external main power failure, the "sampling rates" will be correspondingly activated from "low frequency" to "high frequency" depending on the state of motion of the resolver (see column 2, lines 35-63).

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(It is noted that resolvers have a so-called carrier frequency, which is substantially higher than the revolution frequency to be measured. The "carrier frequency" is thus normally chosen with safe distance to the highest "measure frequency." The higher the "carrier frequency," the power consumption of the resolver is also higher.)

In other words, the measure system has smaller power consumption only, for example, upon the standstill of the robot and the smaller speed. As soon as the robot is in motion state, a higher "sampling frequency" must be activated in order not to lose the positional signal (see column 2, lines 56-59 as well as column 3, lines 1-15). This is also clearly disclosed in the abstract.

It is worth mentioning that only the power consumption for the normal operation of the resolver is reduced and thus the auxiliary power is less burdened when the robot does not move.

In contrast, the invention of the instant application goes a completely different direction for power-saving acquisition of the position signal in order to minimally burden the auxiliary power. In the case of main power failure, only the sensor arrangement needs to be supplied with power in order to record

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segments reached (see page 3, line 17 to page, line 9 of the specification). Therefore, only the necessary coarse values, namely the segments of the composite absolute value are power-savingsly recorded during the operation with the auxiliary power.

The solution of the invention of the instant application is not comparable to that of Taylor et al. The invention of the instant application does not have "sampling rate switching system for a resolver position tracking system (RPT) ... and a plurality sampling rates" or "detection means for determining movement of said resolver." Also, the solution of the invention of the instant application is totally independent of the measures for determining movement state of the robot (resolver) in order to secure the absolute position upon main power failure.

Clearly, Taylor et al. do not show "an encoder receiving during normal operation a voltage supply from said main voltage supply, said encoder being switched to an auxiliary mode and receiving an auxiliary voltage and uses less energy when said main voltage supply fails, said encoder only determining a coarse determination of a measured value made during the auxiliary mode of operation," as recited in claim 17 of the instant application.

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It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 17. Claim 17 is, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 17, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 17-32 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

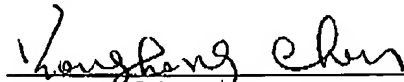
Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section 1.136(a) in the amount of \$60.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any fees which might be due with respect to 37

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CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner  
and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

  
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For Applicant

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YC

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